

**REMARKS**

Reconsideration and allowance in view of the foregoing amendment and the following remarks are respectfully requested.

Claims 1-3 and 45-53 are now pending. Non-elected claims 4-15 have been canceled above to advance prosecution. Applicant reserves the right to file a divisional application directed to the subject matter of the non-elected and now canceled claims.

Pursuant to 37 CFR 1.48(b), this application is being amended to delete the names Norihiro ADACHI, Yoshimi NAKASE and Tomonari CHIBA, who are not the inventors of the invention now being claimed. The present inventorship correction is being diligently made because the non-elected claims have been canceled hereinabove. Pursuant to 37 CFR 1.48(b), this amendment is accompanied by 1) a petition including a statement identifying each named inventor who is being deleted and stating that the inventor's invention is no longer claimed in the application and 2) the fee set forth in 37 CFR 1.17(h) (\$130.00).

The drawings were objected to as allegedly failing to show the insulating resin around the core and the second buffer as recited in claim 1. Applicant respectfully traverses this rejection. In regard to the insulating resin, the insulating resin 26 is disclosed at page 11, lines 11-14. The insulating resin 26 is not shown in Figure 1 as surrounding core 12 because it only filtrates through a narrow space and is too thin to be shown in that Figure. It is shown, however, in several other Figures. To advance prosecution, the insulating resin limitation has simply been deleted from claim 1. With regard to the second buffer, the structure defining the second buffer in an exemplary embodiment of the invention is clearly depicted in the Figures as parts 17b and 17c. That parts 17b and 17c function as a second buffer member as clearly set forth on page 12, lines 1-19 and, in particular, at lines 14-15. Although in the illustrated embodiment, the first buffer and the second buffer are defined by parts of cylindrical member 17 it would be well understood from the original disclosure that these parts do not need to

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be integrally formed and provide distinct functions as noted. Since structure defining a second buffer member is clearly disclosed and illustrated in the elected Figures, withdrawal of the Examiner's drawing objection is respectfully requested.

Claims 1-3 were rejected under 35 USC 112, first paragraph, as applicant allegedly failed to adequately describe or show the insulative resin around the core or the specific structure of the second buffer. As noted above, the insulating resin is disclosed and illustrated in various of the figures as filled radially outside the core, but to advance prosecution, and because the resin is not separately labeled in Figure 1, this limitation has simply been deleted from claim 1. With regard to the specific structure of the second buffer member, this feature is amply disclosed in a number of the drawing figures, including the elected figures, and described with reference to the elected embodiment. One skilled in this art would fully understand the specific structure of the second buffer and its function from applicant's original disclosure. Reconsideration and withdrawal of this rejection is requested,

Claims 1-3 were rejected under 35 USC 112, second paragraph, as being indefinite. The claims have been reviewed and revised above bearing in mind the Examiner's rejection. With regard to the structure of the second buffer, as noted above, in the illustrated embodiment, the structure defining the first buffer and the structure defining the second buffer are integrally formed as parts of cylindrical member 17. It would be well understood by the skilled artisan, however, that the parts of the cylindrical member could be separately formed. To clarify that parts (which may or may not be integrally formed) define the first and second buffer member, the claims have been revised to refer to buffer member parts. It is believed that all claims are now in full compliance with 35 USC 112, all paragraphs, and it is therefore respectfully requested that the rejection be withdrawn.

Original claim 1-2 were rejected under 35 USC 102(e) as being anticipated by Sakamaki. Applicant respectfully traverses this rejection.

As recited in claim 1, the invention is characterized in that a buffer member is provided (first buffer member part) and disposed to cover the two longitudinal end corners of the central core assembly. As recited in dependant claim 2, a second buffer member part may be provided at either or both ends of the central core assembly. The buffer member part(s) absorb a difference in the coefficients of thermal expansion between the core assembly 13 and a secondary spool 20 as described in detail on pages 14-16 of the application.

Claim 1 clearly provides that a first buffer member part, part 17d in the illustrated embodiment, covers the end corners of core assembly 13. Claim 1 further specifies that in the claimed assembly the two coils are disposed with one coil radially inside the other coil. It is respectfully submitted that an ignition coil as specifically recited in claim 1 is not anticipated nor obvious from Sakamaki.

In Sakamaki, end corners of a core 40 are disposed in direct contact with spool 22. No elastic buffer member(s) cover the longitudinal end corners of core 40. Additionally, in the Sakamaki assembly, coils 20 and 30 are disposed axially adjacent one another, so one of those coils is not disposed radially inside the other, as required by applicant's claim 1. It is therefore respectfully submitted that Sakamaki does not anticipate nor render obvious the subject matter of claim 1 or claim 2.

It is noted that claim 3 received no rejection over the prior art. As claim 3 is in full compliance with 35 USC 112, first and second paragraphs, it is respectfully submitted that that claim is in condition for allowance.

It is further submitted that newly presented claims 45-53 are allowable over Sakamaki as well. Indeed, Sakamaki does not teach or suggest an elastic buffer member disposed between the core assembly and the spool and covering at least a longitudinal end corner of the core assembly, as required by claim 45, nor an elastic member disposed in contact with an longitudinal end surface of the core assembly and

in contact with the radial outer surface of the core assembly near the longitudinal end surface as required by claim 52.

All objections and rejections having been addressed, it is respectfully submitted that the present application is in condition for allowance and an early Notice to that effect is earnestly solicited.

Respectfully submitted,

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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE INVENTORSHIP**

Please change the inventorship of the above-referenced application to identify the inventors as:

Akimitsu SUGIURA; Masahiko AOYAMA; Kazuhide KAWAI and Yoshitaka SATO.

**IN THE CLAIMS**

Please substitute the following amended claims for corresponding claims previously presented. A copy of the amended claims showing current revisions is attached.

1. (Amended) An ignition coil for an engine comprising:  
a central core assembly including a rod-shaped core, said central core assembly having two longitudinal ends and corners at said longitudinal ends;  
a primary spool and a secondary spool arranged around an outer circumference of the central core assembly;  
a primary coil wound on the primary spool and a secondary coil wound on the secondary spool, one of the coils being disposed radially inside the other of the coils;  
[an insulating resin member filled around the core;] and  
a first buffer member part covering said two longitudinal end corners of the central core assembly.
2. (Amended) The ignition coil of claim 1, further comprising:  
a second buffer member part arranged [at] on at least one of the two longitudinal ends of the central core assembly.
3. (Amended) The ignition coil of claim 1, wherein:

the first buffer member part is formed into a tube shape and has a hole [in] therein on at least one of the two longitudinal ends of the central core assembly; and the hole is smaller in diameter than the central core assembly.

Kindly cancel claims 4-15 without prejudice or disclaimer.

Kindly add the following new claims:

--45. (New) An ignition coil for an engine comprising:  
a central core assembly including a rod-shaped core, said central core assembly having two longitudinal ends and corners at said longitudinal ends;  
an insulating spool arranged around the core assembly, the spool being made of a resin material having a coefficient of thermal expansion different from a coefficient of thermal expansion of the core assembly;  
a coil wound on the insulating spool; and  
an elastic buffer member disposed between the central core assembly and the spool and covering at least one of said longitudinal end corners of the central core assembly to thereby restrict a direct contact between said at least one longitudinal end corner of the central core assembly and the spool.

46. (New) The ignition coil of claim 45, wherein:  
the elastic buffer member includes a cylindrical part and an annular plate part integrally extending from a longitudinal end of the cylindrical part;  
the cylindrical part covers a cylindrical surface of the central core assembly; and  
the annular plate part covers a longitudinal end surface of the central core assembly.

47. (New) The ignition coil of claim 46, wherein the annular plate part is thicker than the cylindrical part.

48. (New) The ignition coil of claim 46, wherein the annular plate part has a hole at a radial center thereof.

49. (New) The ignition coil of claim 45, wherein the elastic buffer member is formed from an elastomer resin.

50. (New) The ignition coil of claim 45, wherein the elastic buffer member is shaped in a form of a thermally-contractable tube.

51. (New) The ignition coil of claim 45, wherein the central core assembly includes a permanent magnet attached to a longitudinal end of the core and has an end corner that is covered with the elastic buffer member.

52. (New) An ignition coil for an engine comprising:  
a central core assembly including a rod-shaped core said central core assembly having a longitudinal end surface and a radial outer surface;  
an insulating spool arranged around the central core assembly, the spool made of a resin material having a coefficient of thermal expansion different from a coefficient of thermal expansion of the central core assembly;  
a coil wound on the insulating spool; and  
an elastic member disposed in contact with said longitudinal end surface of the central core assembly and in contact with said radial outer surface of the core assembly near the longitudinal end surface, thereby restricting the central core assembly and the spool from directly contacting each other.

53. (New) The ignition coil of claim 45, wherein:  
said insulating spool and said coil are provided as a secondary side for generating a high ignition voltage; and

another spool with coil wound thereon are provided as a primary side radially outside said insulating spool and said coil of the secondary side.--